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DUE TO ATMOSPHERIC CONDITIONS, THE QUALITY OF THE PHOTOGRAPHY RANGED FROM POOR TO EXCELLENT. EXCEPT FOR LOCAL AREAS VEILED BY HAZE, THE HEAVIEST CLOUD COVER WAS ENCOUNTERED BETWEEN DNEPROPETROVSK AND THE BLACK SEA. NO CAMERA MALFUNCTION OCCURRED.

THIS PRELIMINARY REPORT COVERS ITEMS OF IMPORTANT INTELLIGENCE SIGNIFICANCE IN RESPONSE TO REQUIREMENTS LEVIED BY THE INTELLIGENCE COMMUNITY.

SUMMARY

SWINGING IN A WIDE ARC FROM THE ARAL SEA TO THE CRIMEA, THE BAND OF PHOTO COVERAGE INCLUDED MANY MAJOR ITEMS OF INTELLIGENCE INTEREST INCLUDING THE FOLLOWING.

AIRCRAFT AND AIRFIELDS

SEVEN BOMBERS OF A NEW TYPE RESEMBLING BACKFIN.

COVERAGE WAS ALSO OBTAINED OF SOME 100 AIRFIELDS OR REPORTED AIRFIELD SITES. THREE OF THESE ARE NEW MAJOR FIELDS AND TWO ARE NEW MINOR FIELDS. THE REMAINING INCLUDE 24 MAJOR FIELDS AND 24 MINOR FIELDS. A TOTAL OF 1973 AIRCRAFT WAS OBSERVED, INCLUDING 405 BOMBERS, 422 FIGHTERS, 553 OTHER TYPES, WITH 593 UNIDENTIFIED.

BOMBER AIRCRAFT INCLUDE THE 7 RESEMBLING BACKFIN, 51 BULL, 47 BADGER, AND 300 BEAGLE. FIGHTER AIRCRAFT INCLUDE 22 FISHPOT/FISHBED, 4 FITTER, 4 FLASHLIGHT, 19 FARMER, AND 373 FAGOT/FRESCO.

GUIDED MISSILES

PROBABLE LAUNCH AND INSTRUMENTATION FACILITIES AT CHELKAR.

EIGHTEEN ADDITIONAL HEXAGON SAM SITES AND FOUR ADDITIONAL SAM SUPPORT INSTALLATIONS.

A SECOND LOOK AT THE "TWIN EYE" SITE AT BALAKLAVA.

ELECTRONICS

TWO NEW-TYPE RADAR INSTALLATIONS AND FIRST COVERAGE OF A MOON VLF STATION.

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RAILROADS

COVERAGE OF APPROXIMATELY 4,500 NM OF THE USSR RAIL NET.

SHIPPING

A SECOND LOOK, UNDER ADVERSE CONDITIONS, AT NAVAL SHIPPING IN THE SEVASTOPOL AREA.

A. NEW BOMBER AIRCRAFT

NEW BOMBER AIRCRAFT, KAZAN NORTH AIRFIELD
55 52 N - 49 08 E

[REDACTED]

THIS AIRCRAFT (FIGURE 1) IS A TWIN-JET, SWEEP WING BOMBER WITH A SPAN OF APPROXIMATELY [REDACTED] AND A FUSELAGE LENGTH OF APPROXIMATELY 125 FEET. THE WINGS ARE CRANKED APPROXIMATELY ONE-THIRD OF THE WAY OUT FROM THE FUSELAGE. THE LEADING EDGE SWEEPBACK IS [REDACTED] INBOARD OF THE CRANK AND [REDACTED] OUTBOARD OF THE CRANK. THE WINGS ARE MOUNTED WELL BACK ON THE FUSELAGE. A SINGLE WING FENCE IS LOCATED ON EACH WING JUST OUTBOARD OF THE CRANK AND A PROBABLE MAIN GEAR HOUSING SIMILAR TO THAT OF THE BADGER IS MOUNTED APPROXIMATELY 15 FT FROM THE CENTER OF THE FUSELAGE.

CHEEK INLETS ARE LOCATED ON THE FUSELAGE JUST FORWARD OF THE LEADING EDGE OF THE WING. FORWARD OF THE INLETS THE FUSELAGE IS [REDACTED] AFT OF THE INLETS THE FUSELAGE IS [REDACTED] ALL THE WAY TO A LARGE EFFLUX WHICH RESEMBLES THAT OF THE FORMER. THE COCKPIT IS LOCATED WELL FORWARD AND THE NOSE TAPERS TO A SHARP POINT. THE SWEEP BACK EMPENNAGE ASSEMBLY CONSISTS OF A LOW HORIZONTAL TAIL MOUNTED ON THE FUSELAGE AND A LARGE, SHARPLY SWEEP VERTICAL TAIL.

WITH THE EXCEPTION OF THE DIMENSIONS BEING 20 TO 25 PERCENT LARGER, AND A FEW DESIGN MODIFICATIONS THE AIRPLANE RESEMBLES BACKFIN.

THERE ARE 7 OF THE AIRCRAFT ON THE FIELD. SIX ARE PARKED ALONG THE PARKING RAMP. THE OTHER IS PARKED IN FRONT OF THE LARGE REVETMENT IDENTICAL TO THOSE NOTED AT PLANTS 1 AND 18 IN KUYBYSHEV ON [REDACTED] THE AFT SECTION OF THE FUSELAGE AND THE EMPENNAGE ASSEMBLY IS REMOVED FROM THE AIRCRAFT. TWO CABLE LINES LEAD TO NEARBY BUILDINGS, AND SEVERAL PERSONNEL ARE VISIBLE AROUND THE AIRCRAFT INDICATING THAT THE AIRCRAFT MAY BE UNDERGOING ENGINE CALIBRATION.

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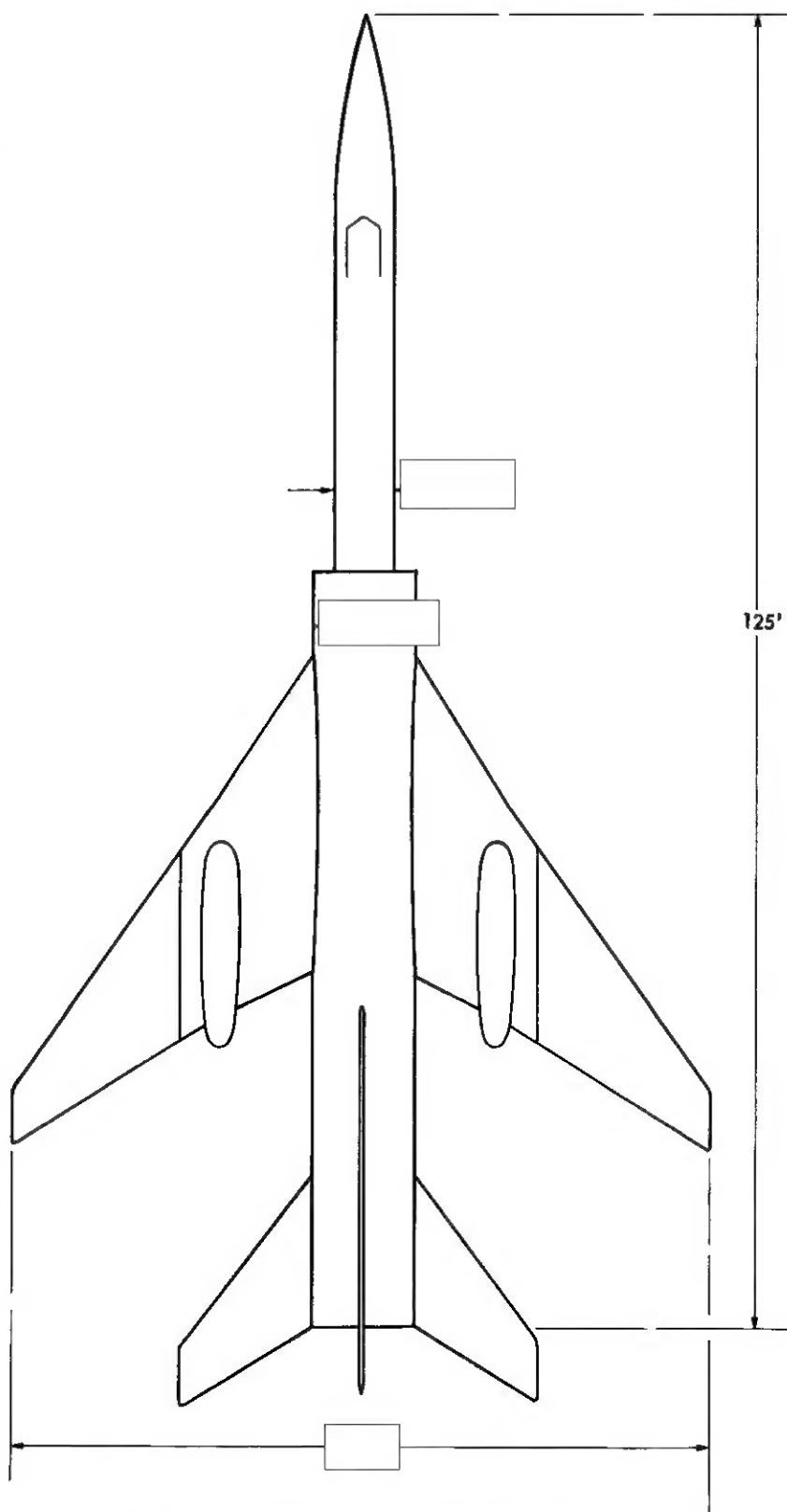


FIGURE 1. PROVISIONAL CONFIGURATION

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B. GUIDED MISSILES

1. HEXADIC SAM SITES AND SUPPORT FACILITIES

A TOTAL OF EIGHTEEN HEXADIC SURFACE-TO-AIR MISSILE (SAM) SITES AND FOUR SUPPORT FACILITIES HAVE BEEN IDENTIFIED IN THE KAZAN, GORKIY, SAROVA, KHARKOV, DNEPROPETROVSK, ZAPOROZHYE, AND SEVASTOPOL AREAS (FIGURE 2). CONSTRUCTION OF ALL SAM SITES AND SUPPORT FACILITIES APPEARS COMPLETE.

TWO SAM SITES AND ONE SUPPORT FACILITY ARE LOCATED IN THE KAZAN AREA. NEITHER OF THE TWO SITES HAS ANY EQUIPMENT INSTALLED. HEAVY SNOW COVERS THESE SITES.

TWO SAM SITES ARE LOCATED IN THE GORKIY AREA. NO EQUIPMENT IS VISIBLE DUE TO THE EXTREME DISTANCE.

TWO SAM SITES AND ONE SUPPORT FACILITY ARE LOCATED IN THE SAROVA AREA. ONE SITE HAS AN OPERATIONAL CAPABILITY. THE OTHER SITE HAS TRANSPORTERS, AND UNIDENTIFIED VEHICLES AND VANS IN THE VEHICLE PARKING AREA, BUT HAS NO EQUIPMENT INSTALLED.

FOUR SAM SITES AND ONE SUPPORT FACILITY ARE LOCATED IN THE KHARKOV AREA. THREE OF THE SITES HAVE AN OPERATIONAL CAPABILITY.

FOUR SAM SITES HAVE BEEN IDENTIFIED IN THE DNEPROPETROVSK AREA. TWO OF THE SITES HAVE AN OPERATIONAL CAPABILITY.

TWO SAM SITES ARE LOCATED IN THE ZAPOROZHYE AREA, AND BOTH OF THESE SITES HAVE AN OPERATIONAL CAPABILITY.

TWO SAM SITES AND ONE SUPPORT FACILITY HAVE BEEN IDENTIFIED IN THE SEVASTOPOL AREA. BOTH SITES HAVE AN OPERATIONAL CAPABILITY.

A TOTAL OF 92 MISSILES, 72 LAUNCHERS, AND 11 FRUIT SET RADARS HAVE BEEN IDENTIFIED AT THE SAM SITES AND SUPPORT FACILITIES.

A TABULATION OF THESE EIGHTEEN SAM SITES AND FOUR SUPPORT FACILITIES IS PRESENTED IN THE FOLLOWING TABLE.

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TABULATION OF HEXADIC SAM SITES AND SAM SUPPORT FACILITIES
IN THE KAZAN, GORKIY, SAROVA, KHARKOV, DNEPROPETROVSK,
ZAPOROZHYE, & SEVASTOPOL AREAS

NO.	DIST & DIR FROM CITY	COORD	STATUS OF CONSTRUCT	LAUNCHERS	MISSILES	GUIDANCE
<u>KAZAN</u>						
1	14NM ENE	5550N 4905E	COMPLETE			
2	14NM NW	5553N 4849E	COMPLETE			
A	5NM E	5548N 4914E	COMPLETE		24	
<u>GORKIY</u>						
3	15NM ESE	5617N 4418E	POSS COMPL	UNK	UNK	UNK
4	20NM S	5603N 4358E	POSS COMPL	UNK	UNK	UNK
<u>SAROVA</u>						
5	9NM SW	5450N 4307E	COMPLETE	UNK	UNK	UNK
6	13NM SW	5449N 4301E	COMPLETE	6	6	1 FRUIT SET
B	3NM W	5455N 4317E	COMPLETE			
<u>KHARKOV</u>						
7	7.5NM NNE	5007N 3616E	COMPLETE	6	6	1 FRUIT SET
8	13NM SE	4953N 3631E	COMPLETE	6	6	1 FRUIT SET
9	12NM WNW	5000N 3556E	COMPLETE	6 POSS		
10	10NM SSW	4950N 3611E	COMPLETE	6	6	1 FRUIT SET
C	8NM SE	4956N 3627E	COMPLETE			
<u>DNEPROPETROVSK</u>						
11	19NM ESE	4822N 3527E	COMPLETE	6 PROB	1 PROB	1 FRUIT SET
12	12NM SSE	4817N 3506E	COMPLETE	6	UNK	1 FRUIT SET
13	12NM SW	4822N 3447E	COMPLETE	6	3 & 3 POSS	1 FRUIT SET
14	25NM WSW	4817N 3425E	COMPLETE	UNK	UNK	UNK

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			<u>ZAPOROZHYE</u>			
15	15NM SSE	4736N 3518E	COMPLETE	6	6	1 FRUIT SET
16	15NM SSW	4736N 3500E	COMPLETE	6	6 PROB	1 FRUIT SET
			<u>SEVASTOPOL</u>			
17	7NM NNE	4443N 3333E	COMPLETE	6	1 PROB	1 FRUIT SET
18	5NM SSW	4431N 3331E	COMPLETE	6		1 FRUIT SET (PROB)
D	3NM SSE	4434N 3333E	COMPLETE		24	
	TOTAL			72	92	11

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2. INSTRUMENTATION AND FIELD-TYPE LAUNCH FACILITIES,
CHELKAR AREA
47 50 N - 59 36 E (CHELKAR)



THREE PROBABLE INSTRUMENTATION AREAS AND ONE PROBABLE FIELD-TYPE LAUNCH INSTALLATION HAVE BEEN IDENTIFIED WITHIN A 50-MILE RADIUS OF CHELKAR. THESE FACILITIES ARE PROBABLY ASSOCIATED WITH THE KAPUSTIN YAR/VLADIMIROVKA MISSILE TEST CENTER.

INSTRUMENTATION AREAS - TWO OF THE INSTRUMENTATION AREAS ARE SITUATED NEAR CHELKAR AND THE THIRD ABOUT 45 MILES TO THE SOUTHEAST, NEAR TUGUZ. THE LATTER AREA, POSITIONED AT ABOUT 47 20N - 60 20E, CONSISTS OF THREE FENCED SITES WHICH CONTAIN VARIOUS TYPES OF ELECTRONIC EQUIPMENT. ONE OF THE TWO AREAS NEAR CHELKAR IS ADJACENT TO CHELKAR AIRFIELD, AND CONSISTS OF A SECURED AREA CONTAINING TOKEN-TYPE RADARS AND SEVERAL OTHER PIECES OF ELECTRONIC EQUIPMENT. THE SECOND AREA NEAR CHELKAR IS LOCATED ABOUT TWO MILES SOUTHEAST OF THE TOWN. IT CONSISTS OF TEN INSTRUMENTATION BUILDINGS, EACH 20 FEET SQUARE AND SIMILAR TO THOSE FOUND AT THE KAPUSTIN YAR/VLADIMIROVKA RANGEHEAD. THESE TEN BUILDINGS ARE POSITIONED AT VARYING DISTANCES ALONG A LINE ABOUT 8,400 FEET IN LENGTH. A POSSIBLE CONTROL BUILDING IS SITUATED TO ONE SIDE AND NEAR THE CENTER OF THE BUILDING ARRAY.

PROBABLE FIELD-TYPE LAUNCH INSTALLATION - THIS INSTALLATION IS LOCATED APPROXIMATELY 25 MILES NORTH OF CHELKAR, AT ABOUT 48 16N - 59 45E. IT CONSISTS OF A FENCED SUPPORT AREA AND A FENCED FIELD-TYPE LAUNCH AREA WITH SEVEN ASSOCIATED VEHICLE REVETMENTS.

3. PROBABLE MISSILE LAUNCH FACILITY, NEAR BALAKLAVA
44 30 N - 33 32 E



THE TWIN PADS OF THE PROBABLE MISSILE LAUNCH SITE NEAR BALAKLAVA APPEAR UNCHANGED SINCE THE PREVIOUS PHOTO COVERAGE IN 1956. NEW SUPPORT BUILDINGS, THREE OF WHICH ARE DRIVE-THROUGH, HAVE BEEN CONSTRUCTED WITHIN THE AREA ENCLOSED BY THE DOUBLE SECURITY FENCE. THE THREE DRIVE-THROUGH BUILDINGS ARE LOCATED ADJACENT TO THE OLD FORT IN THE SOUTHEASTERN EXTREMITY OF THE SECURED AREA. THE UNEXPLAINED

APPEARING ON THE PADS IN 1956 NOW EXTENDS TO THE SURFACE OF THE SERVICE ROADS IN THE VICINITY OF THE PADS.

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25X1

D. ELECTRONICS

1. NEW-TYPE RADAR INSTALLATIONS,
SAROVA AND MICHURINSK
54 55 N - 43 19 E -- 52 54 N - 40 30 E



25X1

TWO NEW-TYPE, NEARLY IDENTICAL RADAR INSTALLATIONS HAVE BEEN LOCATED. ONE IS 27 NM SW OF SAROVA AT 54 35N - 42 53E (ALSO REPORTED UNDER STANTSIIYA SHAL). THE OTHER IS 2 NM E OF MICHURINSK AT 52 55N - 40 40E. THE INSTALLATIONS, WHICH ARE DOUBLE-FENCED, EACH CONTAIN AT LEAST 5 RADARS, IFF EQUIPMENT, AND HF/VHF COMMUNICATIONS.

1. VLF NAVIGATIONAL AID STATION (MOON)
44 53 N - 33 52 E



25X1

A VERY LOW FREQUENCY NAVIGATIONAL AID STATION IS LOCATED APPROXIMATELY 10 NM WSW OF SIMFEROPOL. IT CONSISTS OF A SECURED AREA CONTAINING 4 MASTS 700 FEET HIGH POSITIONED SO AS TO FORM A SQUARE APPROXIMATELY 960 FEET ON A SIDE, AND ABOUT 20 SUPPORT BUILDINGS, ONE OF WHICH IS A LARGE MULTI-STORY CONTROL BUILDING.

E. AIRFIELDS

1. AKTYUBINSK AIRFIELD
50 14 N - 57 13 E



25X1

AIRCRAFT OBSERVED 1 BEAGLE, 5 CRATE, 2 COACH, 14
CREEK, 1 CAB, 4 COLT, 2 MAX, 4 HARE

9,300 X 450 FT NNW/SSE RUNWAY
5,000 X 340 FT NE/SW RUNWAY

SNOW COVER PRECLUDES DETERMINATION OF RUNWAY SURFACE.

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2. NEW AIRFIELD 2.5 NM SE OF ALGA
49 53 N - 57 22 E

[REDACTED]

AIRCRAFT OBSERVED 38 U/I SINGLE ENGINE

2,700 X 1,000 FT LANDING AREA (SNOW COVERED), WITH THE
MAJOR AXIS ORIENTED NE/SW

A SECURED AREA WITH 36 OBJECTS RESEMBLING RADAR DISHES
IS SITUATED NW OF THE AIRCRAFT PARKING AREA.

3. BELGOROD NORTH AIRFIELD
50 39 N - 36 35 E

[REDACTED]

AIRCRAFT OBSERVED 1 COLT (PROBABLE), 10 CREEK
(PROBABLE)

SNOW COVER PRECLUDES DETERMINATION OF LANDING AREA.

4. NEW AIRFIELD 3 NM SE OF BUGURUSLAN
53 35 N - 52 33 E

[REDACTED]

AIRCRAFT OBSERVED 7 U/I SINGLE-ENGINE LIAISON-TYPE

SNOW COVER PRECLUDES DETERMINATION OF RUNWAY AND
AIRFIELD BOUNDARIES

5. BUGURUSLAN AIRFIELD
53 36 N - 52 26 E

[REDACTED]

AIRCRAFT OBSERVED 2 COLT, 1 COACH (POSSIBLE), 38 U/I
SINGLE-ENGINE LIAISON-TYPE

N/S RUNWAY, SNOW-COVERED, SURFACE AND DIMENSIONS
UNDETERMINABLE

6. BUZULUK AIRFIELD
52 49 N - 52 14 E

[REDACTED]

NO AIRCRAFT OBSERVED

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N/S RUNWAY, SNOW-COVERED. LENGTH AND SURFACE NOT DETERMINABLE

7. CHELKAR AIRFIELD
47 50 N - 59 36 E

AIRCRAFT OBSERVED 1 COACH/CRATE, 1 MOOSE

ONE 5,100 X 230 FT NNE/SSW RUNWAY (SNOW COVERED)

8. NEW AIRFIELD 17 NM NE OF CHKALOV
51 58 N - 55 26 E

AIRCRAFT OBSERVED 55 BEAGLE, 2 CREEK, 1 CREEK (PROBABLE)

6,800 X 425 FT E/W BLACKTOP RUNWAY, CLEARED OF SNOW

9. CHKALOV AIRFIELD
51 48 N - 55 07 E

AIRCRAFT OBSERVED 2 CAB

2,300 X 120 FT NNE/SSW RUNWAY

2,900 X 175 FT WNW/ESE RUNWAY

SNOW COVER PRECLUDES DETERMINATION OF RUNWAY SURFACES

FIELD IS FLYAWAY FIELD FOR ADJACENT AIRCRAFT FACTORY, ZAVOD 47

10. CHKALOV CIVIL AIRFIELD
51 47 N - 55 21 E

AIRCRAFT OBSERVED 1 CAB, 10 CREEK, 2 COLT, 4 U/I SINGLE-ENGINE LIAISON-TYPE

ONE 3,000 X 300 FT E/W RUNWAY

ONE 3,500 X 260 FT NNW/SSE RUNWAY

SNOW COVER PRECLUDES DETERMINATION OF RUNWAY SURFACES

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11. CHKALOV/KARGALA AIRFIELD
51 52 N - 55 09 E



AIRCRAFT OBSERVED 24 CAB

SNOW COVER PREVENTS DETERMINATION OF RUNWAY SURFACE
AND MEASUREMENTS

12. CHKALOV SOUTH AIRFIELD
51 39 N - 55 04 E



AIRCRAFT OBSERVED 1 BULL, 39 FAGOT/FRESCO (POSSIBLE)

9,000 X 630 FT E/W RUNWAY, SNOW-COVERED

SECURED AREA ALONG THE E EDGE OF THE BUILDING AREA
CONTAINS 9 OBJECTS RESEMBLING RADAR DISHES

13. CHKALOV SOUTHWEST AIRFIELD
51 43 N - 55 04 E



AIRCRAFT OBSERVED 1 BULL, 13 BEAGLE, 53 FAGOT/FRESCO,
3 CAB, 2 CREEK, 8 FLORA (POSSIBLE), 3 MAX/MOOSE

8,700 X 300 FT E/W RUNWAY, SNOW-COVERED

14. NEW AIRFIELD 2.5 NM SE OF CHUCKOVO
54 15 N - 41 30 E



AIRCRAFT OBSERVED 38 U/I

9,000-FT-LONG N/S RUNWAY, SNOW-COVERED. FIELD IS ON
FAR OBLIQUE

15. CHUGUYEV AIRFIELD
49 50 N - 36 38 E



AIRCRAFT OBSERVED 160 U/I SWEEP-WING FIGHTERS

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6,750 X 175 FT N/S CONCRETE RUNWAY. PARALLEL TAXIWAY
AND CROSSOVER TAXIWAY. LARGE PARKING APRON EAST OF
TAXIWAY.

16. DONGUZ AIRFIELD
51 31 N - 55 00 E

AIRCRAFT OBSERVED 5 FAGOT/FRESCO (POSSIBLE), 1 CAB,
7 COLT (PROBABLE)

8,300 X 200 FT N/S RUNWAY, SNOW-COVERED

17. DONGUZ NORTHWEST AIRFIELD
51 36 N - 54 59 E

AIRCRAFT OBSERVED 1 COACH/CRATE (POSSIBLE)

SNOW COVER PRECLUDES DETERMINATION OF RUNWAY AND
AIRFIELD BOUNDARIES

18. GRAKOVO AIRFIELD
49 42 N - 36 47 E

NO AIRCRAFT OBSERVED

NW/SE RUNWAY, SNOW-COVERED, DIMENSIONS AND SURFACE
UNDETERMINABLE

19. NEW AIRFIELD 5 NM SSW OF GRYAZI
52 25 N - 39 52 E

AIRCRAFT OBSERVED 30 U/I SINGLE-ENGINE FIGHTERS, 6
CAB/COACH

8,500 X 250 FT NE/SW RUNWAY, SNOW-COVERED. ADJACENT
STRIP MAY BE GRAVEL OR SOD AND APPEARS TO BE AN
ALTERNATE FOR BAD-WEATHER USE

20. KACHA AIRFIELD
44 47 N - 33 33 E

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AIRCRAFT OBSERVED 76 FRESCO

6,800 X 170 FT NE/SW CONCRETE RUNWAY

21. KARANKUT AIRFIELD
45 35 N - 34 17 E



NO AIRCRAFT OBSERVED BECAUSE OF HAZE AND POOR
RESOLUTION

8,200 X 240 FT NE/SW CONCRETE RUNWAY. TWO WORLD WAR II
RUNWAYS SOUTH OF THIS RUNWAY NOW ARE POSSIBLE
PARKING AREAS, BUT HAZE PRECLUDES MEASUREMENT



22. KAZAN AIRFIELD
55 47 N - 49 12 E



AIRCRAFT OBSERVED 2 BULL, 6 CAB, 5 COACH, 5 COLT, 6
U/I SINGLE-ENGINE TRANSPORTS

NE/SW RUNWAY AND NW/SE RUNWAY, BOTH SNOW-COVERED,
PRECLUDING MEASUREMENT

23. KAZAN NORTH AIRFIELD
55 52 N - 49 08 E



AIRCRAFT OBSERVED 7 BOMBERS (RESEMBLING BACKFIN),
1 BEAGLE, 2 COOKER, 8 CAMEL, 1 CAB, 1 U/I SINGLE-
ENGINE LIAISON-TYPE

2 RUNWAYS -- ONE NW/SE 10,200 X 300 FT, CONCRETE,
CLEARED OF SNOW. OTHER E/W 4,500 X 265 FT, SNOW-
COVERED

24. KAZAN NORTHWEST AIRFIELD
55 51 N - 49 03 E



AIRCRAFT OBSERVED 8 FAGOT/FRESCO, 1 COLT, 2 CREEK,
23 HOUND, 2 HOUND WITHOUT ROTOR

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NO EVIDENCE OF RUNWAYS ON THIS SNOW COVERED FIELD

25. KHARKOV AIRFIELD
49 55 N - 36 17 E



AIRCRAFT OBSERVED 2 CAT, 10 CAB, 5 COACH, 21 COLT,
16 CREEK, FUSELAGES OF 4 COACH/CRATE

7,100 X 250 FT E/W BLACKTOP RUNWAY, CLEARED OF SNOW.
NW/SE RUNWAY, SNOW-COVERED, PRECLUDING MEASUREMENT
AND SURFACE DETERMINATION. PROBABLE PACKED SNOW
RUNWAY PARALLEL TO AND NORTH OF E/W RUNWAY

26. KHARKOV/ALEKSEYEVKA AIRFIELD
50 03 N - 36 17 E



AIRCRAFT OBSERVED 4 BULL, 5 BEAGLE, 1 BADGER, 4
FLASHLIGHT, 9 FRESCO, 3 FAGOT, 8 CAB, 1 CRATE,
1 COLT, 2 CREEK, 1 HARE, 2 HOUND

ONE 4,300 X 250 FT NNW/SSE POSSIBLE RUNWAY, SNOW
COVERED

27. KHARKOV/LYUBOTIN AIRFIELD
49 58 N - 36 00 E



AIRCRAFT OBSERVED 1 COLT, 4 CREEK (PROBABLE), 29
BEAST (POSSIBLE), 1 MAX/MOOSE (POSSIBLE)

SNOW COVERED, APPEARS TO BE A MINOR SOD FIELD

28. KHARKOV NORTH AIRFIELD
50 01 N - 36 16 E



AIRCRAFT OBSERVED 1 COLT

6,800 X 350 FT NE/SW RUNWAY, SNOW COVERED

29. KHARKOV/ROGAN AIRFIELD
49 55 N - 36 26 E



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AIRCRAFT OBSERVED 17 BEAGLE, 23 CAB, 3 HOUND

POSSIBLE RUNWAY 5,300 (ESTIMATED) X 300 FT NW/SE, SNOW-
COVERED, SURFACE AND EXACT MEASUREMENTS
UNDETERMINABLE

30. KOCHUBEYEVKA AIRFIELD
49 45 N - 35 01 E



AIRCRAFT OBSERVED AT LEAST 28 U/I FIGHTERS (POSSIBLE)
9,000-FT-LONG NNE/SSW RUNWAY, SNOW-COVERED, WIDTH AND
SURFACE UNDETERMINABLE

31. KRIVROY ROG AIRFIELD
47 51 N - 33 18 E



AIRCRAFT OBSERVED NUMBER AND TYPE MADE UNDETERMINABLE
BY SCALE AND OBLIQUITY

NW/SE RUNWAY, SNOW-COVERED, WITH PARALLEL TAXIWAY,
MEASUREMENTS AND SURFACE NOT DETERMINABLE

32. KURAYLI AIRFIELD
50 25 N - 57 02 E



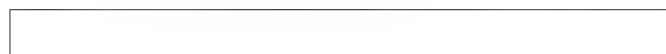
4,700 X 900 FT NW/SE LANDING AREA, SNOW-COVERED
FENCED AREA WITH 36 OBJECTS RESEMBLING RADAR DISHES

33. LIPETSK AIRFIELD
52 37 N - 39 34 E



NO AIRCRAFT OBSERVED. AIRFIELD APPEARS ON FAR OBLIQUE
AND IS SNOW-COVERED

34. LIPETSK WEST AIRFIELD
52 38 N - 39 27 E



NO AIRCRAFT OBSERVED

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8,500-FT-LONG WNW/ESE PROBABLE ASPHALT RUNWAY, CLEARED OF SNOW, WIDTH NOT DETERMINABLE (ASSOTW HAS 6,600 X 280 EST. FT CONCRETE). PARKING AREA IMPROVED OVER PICTURE IN ASSOTW -- IT IS INCREASED IN LENGTH AND NOW IS PARALLEL TO RUNWAY

35. MELITOPOL AIRFIELD
46 53 N - 35 19 E



AIRCRAFT OBSERVED 38 BULL, 18 BADGER

7,760 X 240 FT NE/SW CONCRETE RUNWAY

FACILITIES INCLUDE LARGE POL STORAGE AREA, WITH 4 LARGE BURIED TANKS AND NUMEROUS SMALLER HORIZONTAL TANKS

36. MICHURINSK AIRFIELD
52 56 N - 40 30 E



AIRCRAFT OBSERVED 66 BEAGLE, 1 BULL, 1 COACH, 3 CREEK (PROBABLE)

NNW/SSE PROBABLE HARD-SURFACE RUNWAY, SNOW-COVERED BUT IN USE. SPLIT IN PHOTOGRAPHY PRECLUDES MEASUREMENT

37. MORSHANSK AIRFIELD
53 26 N - 41 43 E



AIRCRAFT OBSERVED 39 U/I SINGLE-ENGINE SWEEP-WING FIGHTERS

7,250 X 120 FT WNW/ESE RUNWAY, SNOW COVERED

38. MUROM AIRFIELD
55 26 N - 42 19 E



NUMEROUS AIRCRAFT OBSERVED BUT SCALE MAKES COUNT AND IDENTIFICATION UNDETERMINABLE

NNE/SSW CONCRETE RUNWAY. OBLIQUITY AND SCALE PRECLUDE RUNWAY MEASUREMENT.

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39. OKTYABRSKOYE AIRFIELD
45 19 N - 34 06 E



NO AIRCRAFT OBSERVED Owing to haze. RUNWAY (SHOWN AS 7,800 X 210 FT ON JULY 1956 PHOTOGRAPHY) VISIBLE BUT HAZE PRECLUDES FURTHER INTERPRETATION

40. ORSK AIRFIELD
51 17 N - 58 36 E



RUNWAY APPROXIMATELY NW/SE. SMALL SCALE PRECLUDES DETERMINATION OF LENGTH OR OTHER DETAILS

41. POLTAVA AIRFIELD
49 37 N - 34 30 E



AIRCRAFT OBSERVED 34 U/I SWEEP-WING BOMBERS, 7 U/I BOMBERS (POSSIBLE)

8,000-FT-LONG E/W CONCRETE RUNWAY



42. PROSANDEYEVKA AIRFIELD
54 09 N - 41 40 E



APPEARS INACTIVE. HAS 18 ABANDONED AIRCRAFT REVENEMENTS, AND NO RUNWAY OR AIRFIELD FACILITIES ARE EVIDENT

43. SAKI AIRFIELD
45 08 N - 33 35 E



AIRCRAFT OBSERVED 6 BEAGLE (PROBABLE), 20 BEAGLE (POSSIBLE)

NE/SW CONCRETE RUNWAY, MEASUREMENTS PRECLUDED BY HAZE AND CLOUDS (ONLY ONE OF 2 REPORTED RUNWAYS VISIBLE ON PHOTOGRAPHY)

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SMALL U/I STORAGE AREA 2.5 NM E OF FIELD; HAS LOOP
TURNAROUND AND IS CONNECTED TO FIELD BY PERMANENT
ROAD

44. SARABUZ AIRFIELD
45 07 N - 33 59 E

AIRCRAFT OBSERVED AT LEAST 17 BADGER, AT LEAST 17
BULL

9,000 X 290 FT NNE/SSW CONCRETE RUNWAY

HAZE AND CLOUDS PRECLUDE DETAILED INTERPRETATION

45. SASOVO AIRFIELD
54 21 N - 41 58 E

AIRCRAFT OBSERVED 3 COLT, 29 CREEK/MULE TYPE, 41 U/I
SINGLE-ENGINE

LANDING AREA SNOW-COVERED, PRECLUDING INTERPRETATION

46. SOLILETSK AIRFIELD
51 10 N - 55 00 E

AIRCRAFT OBSERVED 79 FAGOT/FRESCO (POSSIBLE)

SNOW-COVERED E/W LANDING STRIP 9,700 FT LONG WITH
1,500-FT-WIDE CLEARED AREA

47. SEVASTOPOL AIRFIELD
44 34 N - 33 31 E

AIRCRAFT OBSERVED 4 COLT, 8 CREEK

2,500 X 2,300 FT LANDING FIELD

48. SEVASTOPOL/BELBEK AIRFIELD
44 41 N - 33 34 E

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AIRCRAFT OBSERVED 18 FARMER, 7 FRESCO, 6 FAGOT, 2
MIG-TYPE, 3 CREEK

6,200 X 180 FT NE/SW CONCRETE RUNWAY. NE END HAS 980 X
180 FT SOD OVERRUN, SW END HAS 1,440 X 180 FT
SOD OVERRUN

AIRFIELD IS ENCLOSED BY PERIMETER FENCE AND HAS
NUMEROUS BARRACKS AND ADMINISTRATION-TYPE BUILDINGS,
LIMITED HANGAR AND MAINTENANCE FACILITIES

49. SEVASTOPOL NORTHWEST SEAPLANE STATION
44 38 N - 33 31 E



NO AIRCRAFT OBSERVED

50. TAMBOV AIRFIELD
52 42 N - 41 22 E



AIRCRAFT OBSERVED APPROXIMATELY 117 U/I JETS

10,250 X 280 FT N/S PROBABLE CONCRETE RUNWAY, WITH
PARALLEL TAXIWAY TO THE W AND CROSSOVER TAXIWAYS.
FORMERLY A SOD FIELD ABOUT 8,000 X 6,000 FT

51. TAMBOV/DONSKOYE AIRFIELD
52 48 N - 41 30 E



AIRCRAFT OBSERVED 1 CAB (POSSIBLE), 2 COLT
(POSSIBLE), 6 CREEK (POSSIBLE)

RUNWAY N/S, PROBABLE SOD. SNOW COVER PRECLUDES
DETERMINATION OF DIMENSIONS.

52. USMAN AIRFIELD
52 01 N - 39 39 E



AIRCRAFT REVETMENTS VISIBLE. SNOW COVER PRECLUDES
INTERPRETATION

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53. VOLCHANSK AIRFIELD
50 19 N - 36 55 E



AIRCRAFT OBSERVED 1 BULL, 6 FAGOT/FRESCO, 32 CAB

NE/SW RUNWAY, DIMENSIONS AND SURFACE UNDETERMINABLE
OWING TO SNOW COVER

54. VORONEZH/CHERTOVITSKOYE AIRFIELD
51 48 N - 39 13 E



AIRCRAFT OBSERVED 1 COLT, 3 CREEK, 14 MAX/MOOSE, 6
BEAST (POSSIBLE)

DETERMINATION OF LANDING AREA PRECLUDED BY SNOW COVER

55. VORONEZH EAST AIRFIELD
51 39 N - 39 15 E



AIRCRAFT OBSERVED 11 BADGER, 1 BEAGLE, 15 CAT
(MODIFIED), 1 COLT, 1 CREEK, 2 CAB, 2 MAX

7,000 X 230 FT NE/SW CONCRETE RUNWAY, CLEARED OF SNOW

56. VORONEZH NORTH AIRFIELD
51 42 N - 39 10 E



AIRCRAFT OBSERVED 4 CRATE, 7 CAB, 4 COLT, 3 CREEK,
2 MAX/MOOSE (PROBABLE), 1 HOUND, 2 U/I SINGLE-ENGINE
TRAINER-TYPE

2 RUNWAYS, SNOW-COVERED, SURFACE UNDETERMINABLE --
6,425 X 375 FT NE/SW AND 5,000 X 375 FT NW/SE

57. VORONEZH SOUTHWEST AIRFIELD
51 37 N - 39 08 E



AIRCRAFT OBSERVED 1 BULL, 47 BEAGLE, 39 FRESCO
(PROBABLE), 4 FITTER (PROBABLE), 22 FISHPOT, 2 COLT,
4 CREEK, 6 CAB, 1 CRATE, 2 COACH, 2 HARE, 3 HOUND

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8,200 X 250 FT E/W RUNWAY, SNOW-COVERED, SURFACE TYPE
NOT DETERMINABLE.

DOUBLE-FENCED STORAGE AREA, MATERIAL U/I, 6,000 FT SW
OF W END OF RUNWAY

58. YOSHKAR-OLA AIRFIELD
56 45 N - 47 56 E



FAR OBLIQUE PHOTOGRAPHY MAKES PRESENCE OF AIRCRAFT
UNDETERMINABLE

11,000 (APPROX.) FT NNE/SSW RUNWAY, SNOW-COVERED, WITH
PARALLEL TAXIWAY

59. ZAPOROZHYE EAST AIRFIELD
47 52 N - 35 18 E



AIRCRAFT OBSERVED 8 BEAGLE, 60 BEAGLE (PROBABLE),
28 FAGOT/FRESCO (POSSIBLE), 3 COACH/CRATE
(POSSIBLE), 1 TRANSPORT-TYPE (POSSIBLE), 2 U/I
SINGLE ENGINE

NEW 7,500 X 250 FT NNE/SSW BLACKTOP RUNWAY, CLEARED OF
SNOW

A DOUBLE-FENCED UNIDENTIFIED STORAGE AREA IS SITUATED
APPROXIMATELY 1,800 FEET EAST OF THE SSW END OF THE
RUNWAY. TWO OTHER FORMER RUNWAYS NOW APPEAR TO BE
USED AS PARKING AREAS.

60. ZAPOROZHYE SOUTH AIRFIELD
47 47 N - 35 13 E



NO AIRCRAFT OBSERVED

SOD LANDING FIELD 4,500 X 3,000 FT

61. ZAPOROZHYE SOUTHEAST AIRFIELD
47 48 N - 35 15 E



AIRCRAFT OBSERVED 1 CAB, 1 U/I TWIN ENGINE, 10 COLT/
CREEK (PROBABLE)

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4,500 X 3,800 FT SOD FIELD WITH MAJOR AXIS E/W

62. AIRFIELDS PREVIOUSLY REPORTED BUT NOT CONFIRMED
THE FOLLOWING AIRFIELDS WERE NOT CONFIRMED BECAUSE OF
CLOUDS, SNOW COVER, OR DISTANCE.

KURSK EAST AIRFIELD
51 45 N - 36 18 E

ARZAMAS AIRFIELD
55 20 N - 43 44 E

YEFREMOV AIRFIELD
53 09 N - 38 03 E

BELGOROD AIRFIELD
50 35 N - 36 40 E

TOTSKOYE AIRFIELD
52 31 N - 52 45 E

YELETS WEST AIRFIELD
52 38 N - 38 25 E

DZHANKOY AIRFIELD
45 42 N - 34 25 E

SOVETSKIY AIRFIELD
45 22 N - 34 57 E

ISLAM-TEREK AIRFIELD
45 10 N - 35 11 E

NIKIFOROVKA AIRFIELD
52 53 N - 40 49 E

YEVPA TORIYA AIRFIELD
45 13 N - 33 22 E

BOGOYAVLENSKOYE AIRFIELD
53 16 N - 40 18 E

RYAZHSK AIRFIELD
53 41 N - 40 00 E

YEVPA TORIYA SEAPLANE STATION
45 11 N - 33 23 E

SIMFEROPOL NORTH AIRFIELD
45 01 N - 33 59 E

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SIMFEROPOL AIRFIELD
44 55 N - 34 04 E

PESCHANOYE AIRFIELD
44 52 N - 33 37 E

IZYUM AIRFIELD
49 15 N - 37 09 E

YELETS AIRFIELD
52 39 N - 38 31 E

DNEPROPETROVSK/VOLOSHKOYE AIRFIELD
48 21 N - 35 06 E

DNEPROPETROVSK/VOLOSHKOYE NORTHEAST AIRFIELD
48 33 N - 35 06 E

SEVASTOPOL WEST SEAPLANE STATION
44 36 N - 33 27 E

63. AIRFIELDS PREVIOUSLY REPORTED BUT ABANDONED OR NOT
APPARENT ON THE PHOTOGRAPHY

GRYAZI AIRFIELD
52 28 N - 39 56 E

KRASNOGRAD AIRFIELD
49 24 N - 35 29 E

SEVASTOPOL/KHERSONESSKIY AIRFIELD
44 34 N - 33 32 E

KHARKOV/GROBLI AIRFIELD
49 56 N - 36 21 E

DNEPRODZERZHINSK AIRFIELD
45 29 N - 34 36 E

SOLENOYE AIRFIELD
48 14 N - 34 51 E

VORONEZH AIRFIELD
51 39 N - 39 08 E

SASOVO EAST AIRFIELD
54 21 N - 41 59 E

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KHOBOTOVO AIRFIELD
53 02 N - 40 22 E

MICHURINSK WEST AIRFIELD
52 55 N - 40 25 E

SELEZNI AIRFIELD
52 49 N - 41 18 E

TAMBOV NORTHWEST AIRFIELD
52 46 N - 41 22 E

AKTYUBINSK NORTHEAST AIRFIELD
50 19 N - 57 20 E

KAZAN WEST AIRFIELD
55 51 N - 48 54 E

KAZAN EAST AIRFIELD
55 48 N - 49 23 E

SHATSK AIRFIELD
54 03 N - 41 44 E

STARYY OSKOL NORTHWEST AIRFIELD
51 20 N - 37 45 E

F. MAJOR INSTALLATIONS AND AREAS

1. AKTYUBINSK
50 17 N - 57 10 E



EXCELLENT COVERAGE OF THE CITY SHOWS SEVERAL INDUSTRIES BUT NO UNUSUAL ACTIVITY AND NO APPARENT EXPANSION. COVERAGE INCLUDES THE HUGE FERROALLOY PLANT 5 NM NW OF THE CITY, A HOUSING AREA ROUGHLY 1/4 THE SIZE OF THE CITY, LOCATED SOUTH OF THE PLANT, THE ALGA CHEMICAL PLANT (WHICH PROBABLY PRODUCES SULFURIC ACID) 20 NM S OF THE CITY, AND AN OIL FIELD 45 NM SW OF THE CITY.

2. BELGOROD
50 36 N - 36 35 E



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THE BELGOROD AREA IS COMPLETELY COVERED BY GOOD QUALITY PHOTOGRAPHY WHICH REVEALS EXPANSION OF THE CITY AND SEVERAL INDUSTRIES, INCLUDING A LARGE CEMENT PLANT. A RADIO STATION IS SITUATED ON A HILL SOUTH OF THE CITY. AN UNIDENTIFIED RAIL-SERVED INSTALLATION IS UNDER CONSTRUCTION 13 NM NORTHWEST OF THE CITY.

3. BUGURUSLAN
53 39 N - 52 27 E

A GREAT EXPANSION TO THE SOUTH OF THE OLDER PART HAS APPROXIMATELY DOUBLED THE SIZE OF THE CITY. THE AREA INCLUDES SCATTERED LIGHT INDUSTRIES AND OIL FIELDS.

4. BUZULUK
52 47 N - 52 16 E

THIS CITY APPEARS ON FAR OBLIQUE PHOTOGRAPHY AND IS HAZE-COVERED.

5. CHELKAR
47 51 N - 59 38 E

THE CITY IS FULLY COVERED BY GOOD-QUALITY PHOTOGRAPHY.

6. CHKALOV
51 47 N - 55 07 E

THE CITY IS COVERED 100% BY GOOD-QUALITY PHOTOGRAPHY. THERE IS MODERATE EXPANSION IN THE NW PART OF THE CITY, WITH SCATTERED INDUSTRIES PRESENT. CHKALOV AIRFRAME PLANT NO 47 APPEARS ACTIVE. NO AIRCRAFT ARE IN THE PLANT AREA, BUT AIRCRAFT CRATES ARE PRESENT IN THE EASTERN PART OF THE PLANT. TWO COMMUNICATION SITES, ABOUT 1.5 NM APART, ARE VISIBLE 5 NM NNE OF THE CITY. ONE SITE HAS 2 RHOMBICS AND SEVERAL STICK MASTS. THE OTHER SITE HAS AT LEAST 4 RHOMBICS AND SEVERAL MASTS.

A MILITARY TRAINING AREA IS LOCATED 16.5 NM SSW OF CHKALOV, AT THE VILLAGE OF DONGUZ.

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7. DONSKOYE
50 15 N - 58 31 E



A CHROMIUM MINE, AND NICKEL AND IRON HAVE BEEN REPORTED IN THIS AREA. PHOTOGRAPHY SHOWS THREE LARGE OPEN PITS, EACH RAIL SERVED.

8. DNEPRODZERZHINSK
48 31 N - 34 37 E



GOOD COVERAGE OF THE ENTIRE CITY, AFFECTED ONLY BY SMOKE FROM INDUSTRIAL PLANTS, INCLUDES THE [REDACTED] AND INDUSTRIAL EXPANSION SINCE WORLD WAR II AS FOLLOWS.

1. STEEL PLANT DZERZHINSKY, WITH A NEW BATTERY OF FURNACES AND A ROLLING MILL.
2. RAILROAD CAR PLANT PRAVDA, WITH SEVERAL ADDITIONAL BUILDINGS.
3. COKE CHEMICAL PLANT ORDZHONIKIDZE, WITH INCREASED FACILITIES.
4. COKE CHEMICAL PLANT KAMENSKOYE, REPORTED NEAR COMPLETION IN 1952. THIS PLANT APPEARS TO BE IN FULL PRODUCTION, [REDACTED]

5. A NEW U/I PLANT U/C, ADJACENT TO THE COKE PLANT.

6. A NEW PLANT AT 48 27 N - 34 42 E, ADJACENT TO AN 8-GUN HEAVY AA POSITION.

THERE IS NEW URBAN DEVELOPMENT EAST, SOUTH, AND WEST OF THE CITY, AS WELL AS WITHIN THE CITY.

AT A RAIL SPUR TERMINUS APPROXIMATELY 8 NM NW OF THE CITY, OUT OF THE NORMAL FLOW OF TRAFFIC, THERE IS A NEW U/I PLANT, INCLUDING THREE LARGE MULTISTORY BUILDINGS, A HEAVY-INDUSTRIAL-TYPE BUILDING, AND A POWER STATION WITH NEW HOUSING ADJACENT TO IT.

ON THE DNEPR, ABOUT 3 NM NW OF THE TOWN, THERE IS A NEW LOW DAM AND POWER PLANT IN EARLY STAGES OF CONSTRUCTION. THE PROJECT INCLUDES A LARGE EARTH COFFERDAM AND PROBABLE NAVIGATION LOCKS.

9. DNEPROPETROVSK
48 27 N - 35 00 E



HAZE AND CLOUD COVER PRECLUDE DETAILED INTERPRETATION OVER MUCH OF THE AREA. FOR EXAMPLE, STREET PATTERN AND BUILT-UP AREAS IN MANY INSTANCES ARE BARELY DISCERNIBLE.

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THE MOTOR VEHICLE FACTORY COMPLEX (DAZ) IS ONLY FAINTLY VISIBLE.

IN THE AREA AROUND DNEPROPETROVSK PHOTO QUALITY VARIES FROM POOR TO GOOD. MIDWAY BETWEEN DNEPROPETROVSK AND DNEPRODZHERZHINSK IS AN U/I ROAD AND RAIL-SERVED INSTALLATION SECURED BY DOUBLE FENCING, GUARD TOWERS, GATE HOUSE, AND PATROL ROADS. FEATURES OF THIS INSTALLATION, INCLUDING THE SECURITY, COMMUNICATIONS, AND WIDE-RADIUS ROAD TURNS, SUGGEST UTILIZATION OTHER THAN OPEN STORAGE.

AN AREA NEAR NOVOMOSKOVSK (48 38 N - 35 14 E) MAY BE THE PAVLOGRAD PROVING GROUND.

10. GORKIY
56 19 N - 44 00 E



THE CITY IS VISIBLE ON THE FAR OBLIQUE. SEVERAL LARGE INDUSTRIES WITH SMOKING STACKS CAN BE SEEN. AN ANTENNA FARM WITH 18 STICK MASTS IS LOCATED ON THE SOUTH SIDE OF THE OKA RIVER SSW OF THE CITY. A SAM SITE SSW OF THE CITY IS LOCATED AT ABOUT 56 07N - 43 44E. ALSO VISIBLE IS A POSSIBLE PETROLEUM REFINERY SSE OF GORKIY. HAZE AND OBLIQUITY PRECLUDE A DETAILED INTERPRETATION OF THE URBAN AREA, AND THE AIRFIELDS ARE NOT READILY DISCERNIBLE.

11. GRYAZI
52 30 N - 39 57 E

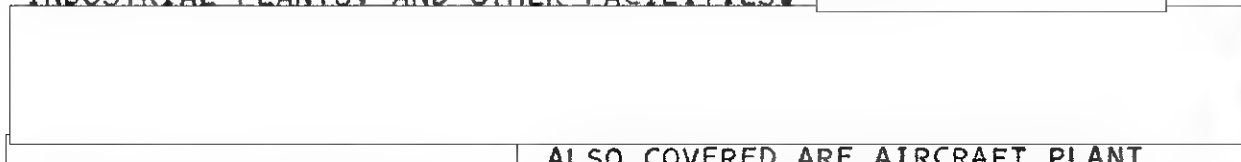


COMPLETE COVERAGE OF THE AREA INCLUDES A DISTILLERY AND THREE RAIL YARDS, THE LARGEST OF WHICH HAS LOCOMOTIVE AND CAR REPAIR FACILITIES. THREE TRANSMISSION LINES CONVERGE AT A LARGE RAIL-SERVED SUBSTATION.

12. KAZAN
55 47 N - 49 08 E



GOOD COVERAGE OF THE ENTIRE KAZAN AREA SHOWS EXTENT OF URBAN DEVELOPMENT, TRANSPORTATION NETWORKS, NUMEROUS INDUSTRIAL PLANTS, AND OTHER FACILITIES.



ALSO COVERED ARE AIRCRAFT PLANT 387, ENGINE PLANT 16, AND AIRFRAME PLANT 22. AIRCRAFT PLANT 387, REPORTED TO MANUFACTURE HELICOPTERS, HAS 13 FAGOT/

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FRESCO AND ONE PROBABLE FARMER IN OPEN STORAGE. THE PLANT IS RAIL-SERVED BUT HAS NO FLYAWAY FIELD. ENGINE PLANT 16, APPROXIMATELY 25 PERCENT LARGER THAN IN 1942, HAS 6 NEW-TYPE ENGINE TEST CELLS.

EXPLOSIVES STORAGE AREA NOVOYE ARAKHCHINO, NORTHWEST OF THE CENTER OF THE CITY, AND A NEW HIGHWAY BETWEEN KAZAN AND ZELENODOLSK ALSO APPEAR ON THE PHOTOGRAPHY.

YUDINO, 7 NM W OF KAZAN, SHOWS A 30% EXPANSION. IT HAS A LARGE RAILROAD CLASSIFICATION YARD WITH A LARGE OPEN STORAGE AREA AT THE EAST END OF THE YARD. THE STORAGE AREA REPORTED AS ITEM 10 ON ADF SHEET 0165-9999-1-25MA (PROV) HAS BEEN REMOVED.

13. KHARKOV
49 59 N - 36 14 E



THE ENTIRE CITY AND SURROUNDING AREA ARE COMPLETELY COVERED BY EXCELLENT QUALITY PHOTOGRAPHY. THE FOLLOWING ARE AMONG INSTALLATIONS COVERED IN THE CITY.

1. KHARKOV TRACTOR PLANT ORDZHONIKIDZE, EXPANDED BY ONE QUARTER TO ONE THIRD SINCE 1943 PHOTO COVERAGE.
2. KHARKOV BEARING PLANT 8, EXPANDED ABOUT 10 PERCENT SINCE 1943 COVERAGE.
3. KHARKOV MACHINE TOOL PLANT MOLOTOV, WITH ONE NEW ASSEMBLY BUILDING SINCE 1943.
4. KHARKOV AIRCRAFT ASSEMBLY PLANT 135, EXPANDED ABOUT 50 PERCENT SINCE 1951.
5. TWO NEW PROBABLE MECHANICS SCHOOLS, WITH VARIOUS TYPES OF AIRCRAFT.
6. KHARKOV TANK AND LOCOMOTIVE PLANT KOMINTERN 75, WITH ONLY MINOR CHANGES SINCE 1942. PRIME MOVERS AND TANKS ARE PARKED IN ROWS IN THE PLANT AREA. IN ADDITION, AT LEAST 110 SLENDER UNIDENTIFIED OBJECTS, APPROXIMATELY 30 FEET LONG, [REDACTED] FEET WIDE, AND HAVING A SMALL UPWARD PROJECTION AT ONE END, ARE LOCATED AT TWO PLACES IN THE PLANT AREA.
7. KHARKOV AGRICULTURAL MACHINERY PLANT, WITH ONLY MINOR CHANGES SINCE 1942.
8. KHARKOV ELECTRO-MECHANICAL PLANT KHEMS, WITH ONLY MINOR CHANGES SINCE 1942.

SOUTHWEST OF KHARKOV, THE MILITARY COMPLEX AROUND CHUGUYEV AND THE ARMY BARRACKS AND AMMUNITION DEPOT NEAR BALAKLEYA ARE ALSO COVERED BY PHOTOGRAPHY. A COAL-BURNING THERMAL POWER PLANT, SERVED BY A RAIL SPUR FROM THE KHARKOV - CHUGUYEV RAIL LINE, IS LOCATED 3.5 NM WSW OF CHUGUYEV.

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14. LIPETSK
52 37 N - 39 36 E



THE LIPETSK URBAN AREA APPEARS ON THE FAR OBLIQUE. HAZE AND OBLIQUITY PRECLUDE A DETAILED INTERPRETATION OF THE CITY, BUT NUMEROUS INDUSTRIES ARE EVIDENT AND IN OPERATION. THE LIPETSK AMMUNITION DEPOT, WHICH IS RAIL-SERVED AND CONTAINS APPROXIMATELY 70 STORAGE BUILDINGS, IS ALSO COVERED.

15. MICHURINSK
52 53 N - 40 30 E



COMPLETE COVERAGE OF THIS RAIL CENTER INCLUDES FOUR RAIL YARDS, ONE LOCOMOTIVE AND CAR REPAIR PLANT, AND A POWER PLANT. THERE IS MODERATE TO HEAVY TRAFFIC IN THE YARDS, ONE OF WHICH HAS 15 EIGHTY-FOOT PROBABLE PASSENGER CARS.

16. SEVASTOPOL
44 36 N - 33 32 E



WIDESPREAD HAZE AND PARTIAL CLOUD COVER LIMITED DETAILED INTERPRETATION IN THE SEVASTOPOL AREA.

NAVAL SHIPPING SEEN INCLUDED THE FOLLOWING -- 1 LIGHT CRUISER, 2 OLD CRUISER HULLS, 12 DESTROYERS, 1 PROBABLE OLD DESTROYER HULL, 3 DESTROYER ESCORTS, AND 13 SUBMARINES, INCLUDING 5 SMALL COASTAL SUBS. OTHER SHIPPING NOTED -- SEVERAL AUXILIARIES, NUMEROUS MERCHANT SHIPS AND SMALL CRAFT.

17. SHUMERLYA
55 32 N - 46 23 E



GOOD COVERAGE OF THIS CITY SHOWS A POWER PLANT, A REPORTED AIRCRAFT PLANT, SEVERAL OTHER INDUSTRIES, AND EXPANDED RAIL FACILITIES.

18. TAMBOV
52 43 N - 41 27 E



GOOD QUALITY, FAR-OBLIQUE COVERAGE OF THE CITY SHOWS RAILROAD ACTIVITY, PROBABLE MILITARY ACTIVITY, AND EXPANSION

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OF INDUSTRIES. AMONG INDUSTRIES COVERED ARE THE TAMBOV SYNTHETIC RUBBER PLANT, WHICH IS MUCH EXPANDED SINCE WORLD WAR II, AND THE KOTOVSK CHEMICAL AND EXPLOSIVES PLANT 204. THE NEARBY TOWN OF RAZZKAZOVO HAS UNIDENTIFIED INDUSTRIES AND STORAGE.

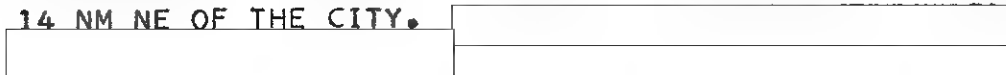
A STORAGE AREA, ON THE FAR OBLIQUE AND UNIDENTIFIED AS TO TYPE OF MATERIAL, IS LOCATED AT 52 25N - 41 30E, 16 NM S OF TAMBOV. THE AREA IS RAIL-SERVED, COVERS ABOUT 1,200 ACRES (2 X 1 MILE), AND CONTAINS 60 BUILDINGS.

19. TOTSKOYE

52 32 N - 52 45 E



THE CITY IS COVERED BY FAR OBLIQUE PHOTOGRAPHY. A POSSIBLE BARRACKS AREA, PARTIALLY CLOUD-COVERED, IS LOCATED ABOUT 1 NM NE OF THE CITY ON THE NORTH BANK OF THE RIVER. AN OIL FIELD IS LOCATED AT 52 38N - 53 00E, 14 NM NE OF THE CITY.

20. VORONEZH

51 40 N - 39 12 E

(9R69L/2175-2212, 9L/2127)

THE CITY OF VORONEZH IS COVERED BY EXCELLENT QUALITY PHOTOGRAPHY. MAJOR INSTALLATIONS IN THE AREA INCLUDE VORONEZH AIRCRAFT ASSEMBLY PLANT 64, WHICH HAS A FINAL ASSEMBLY BUILDING ADDED SINCE 1942, VORONEZH AIRCRAFT ENGINE PLANT 265, SLIGHTLY EXPANDED SINCE 1942, AND VORONEZH SYNTHETIC RUBBER PLANT, WHICH HAS BEEN REBUILT SINCE 1942.

A NEW TOWN AND A U/I RAIL-SERVED INDUSTRY APPEAR ON OBLIQUE PHOTOGRAPHY 37 NM ENE OF VORONEZH.

21. ZAPOROZHYE

47 50 N - 35 11 E



THE ZAPOROZHYE AREA IS COVERED BY PHOTOGRAPHY OF ONLY FAIR QUALITY BECAUSE OF WIDESPREAD HAZE. THE FOLLOWING ARE SOME OF THE MORE IMPORTANT INDUSTRIAL PLANTS NOTED.

1. ALUMINA AND ALUMINUM PLANT DNEPR. HAZE OBSCURES DETAILS.

2. METALLURGICAL COMBINE ZAPOROZHSTAL, WHICH IS ABOUT 60 TO 75 PERCENT LARGER THAN AT THE TIME OF WORLD WAR II COVERAGE.

3. CARBORUNDUM PLANT, WHICH IS EXPANDED SINCE WORLD WAR II COVERAGE.

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A DOUBLE-FENCED ROAD AND RAIL-SERVED STORAGE AREA, WITH 12 EARTH-COVERED OBLONG TANKS, IS LOCATED 10 NM NE OF ZAPOROZHYE.

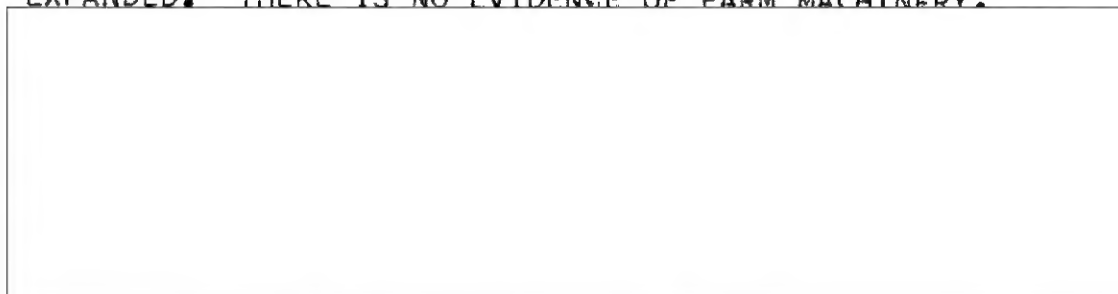
22. ZELENODOLSK
55 50 N - 48 30 E



COVERAGE INCLUDES THE FOLLOWING INSTALLATIONS.

ZELENODOLSK SHIPYARD 340 --
4 SUBCHASERS ARE VISIBLE (2 ON THE SIDE LAUNCHING WAYS AND 2 LOCKED IN THE ICE). THE YARD HAS BEEN CONSIDERABLY IMPROVED SINCE 1942 PHOTOGRAPHY.

ZELENODOLSK AMMUNITION AND AGRICULTURAL MACHINERY PLANT SERGO ORDZHONIKIDZE 184 -- THE PLANT HAS BEEN EXPANDED. THERE IS NO EVIDENCE OF FARM MACHINERY.



PLYWOOD PLANT FURNIR 3 -- APPEARS ACTIVE.

ZELENODOLSK RAILROAD BRIDGE -- THIS BRIDGE OVER THE VOLGA IS NOW A DOUBLE BRIDGE, WITH BOTH SPANS THROUGH TRUSS.

NEW ALIGNMENT OF RAILROAD LINE 7 NM SW OF CITY REPORTED UNDER CONSTRUCTION IS NOW COMPLETE.

G. OTHER INSTALLATIONS

1. ANDREYEVKA
49 32 N - 36 37 E



OBLIQUE PHOTOGRAPHY SHOWS THE ZMIYEVSKAYA GRES UNDER CONSTRUCTION 31 NM SSE OF KHARKOV, NEAR ANDREYEVKA. THIS GAS-BURNING POWER PLANT, WHICH IS IN AN EARLY CONSTRUCTION STAGE, IS RAIL-SERVED.

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2. BOGATENKA
49 17 N - 35 48 E

LOCATED 1 NM SW OF THIS CITY AND 50 NM ESE OF POLTAVA IS A MILITARY STORAGE AREA, DOUBLE-FENCED AND RAIL-SERVED, WITH ASSOCIATED SUPPORT AREA. THE STORAGE AREA CONTAINS ABOUT 55 WAREHOUSE BUILDINGS, 2 HEAT PLANTS, 1 LARGE BARREL-ROOFED BUILDING, AND MATERIAL IN OPEN STORAGE. THE SUPPORT AREA IS SINGLE-FENCED AND HAS SEVERAL BARRACKS AND ASSOCIATED BUILDINGS.

3. DZERZHINSK
56 15 N - 43 34 E

THIS URBAN AREA SHOWS INDUSTRIAL ACTIVITY, BUT HAZE AND EXTREME OBLIQUITY PRECLUDE ANY DETAILED INTERPRETATION.

4. KANASH
55 31 N - 47 29 E

A FENCED POL STORAGE AREA WITH 9 TANKS IS LOCATED IN WOODS 12 NM NE OF KANASH.

5. MELITOPOL
46 50 N - 35 22 E

APPROXIMATELY 20 NM W OF THE CITY ARE EARTH SCARS WHICH MAY BE SURFACE MINING.

6. MORSHANSK
53 27 N - 41 49 E

COVERAGE INCLUDES THE CITY AND THE RAILROAD YARDS AND SHOPS, BUT SMOKE OBSCURES DETAILS OF THE RAIL YARDS.

7. MITKINO AMMUNITION DEPOT
56 46 N - 47 37 E

THIS RAIL-SERVED SECURED INSTALLATION, SITUATED IN A

33
TOP SECRET CHESS

ODE - 8009

DATE OF INFO 5 FEBRUARY 1960

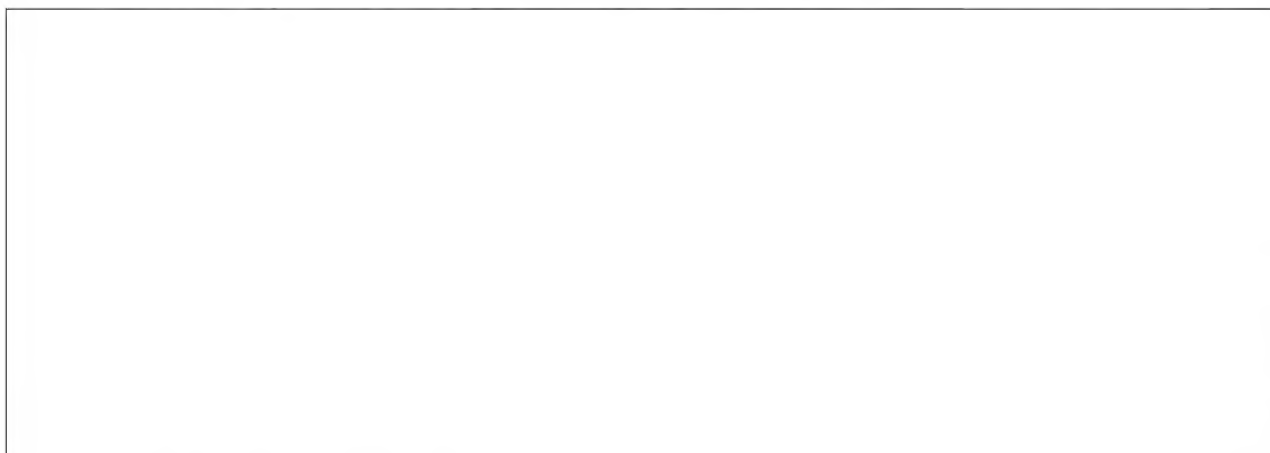
PAR - 573 - 60
14 FEBRUARY 1960

WOODED AREA, CONTAINS APPROXIMATELY 30 BUILDINGS. IT
APPEARS ONLY ON FAR-OBLIQUE PHOTOGRAPHY.

8. POLTAVA
49 37 N - 43 30 E



THIRTEEN NM E OF THE CITY IS AN U/I RAIL-SERVED
INSTALLATION, WITH A DOUBLE FENCE INCLOSING 23 WAREHOUSE-
TYPE BUILDINGS AND A POSSIBLE POWER PLANT.



10. SOLILETSK
51 12 N - 54 57 E



FAR OBLIQUE PHOTOGRAPHY SHOWS A POL STORAGE AREA WITH
60 VERTICAL, CYLINDRICAL TANKS AND POSSIBLY SOME REFINING
FACILITIES LOCATED JUST NORTH OF SOLILETSK AND 4.5 NM NW OF
SOLILETSK AIRFIELD.

11. STANTSIYA CHEREMAS
55 40 N - 43 50 E



NEAR THIS VILLAGE A PROBABLE MILITARY STORAGE DEPOT
APPEARS ON FAR OBLIQUE PHOTOGRAPHY. THE DEPOT HAS ABOUT 40
BUILDINGS, 10 OF WHICH ARE REVETTED.

12. STANTSIYA SHAL
54 27 N - 42 48 E



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THIS IS THE CENTER OF A SERIES OF SMALL RAIL-SERVED COMMUNITIES, CONSISTING OF HOUSING AND LIGHT FABRICATION FACILITIES, WHICH ARE APPARENTLY INVOLVED IN LUMBERING. ACTIVITY EXTENDS ALONG A N/S RAIL LINE ABOUT 15 NM IN BOTH DIRECTIONS FROM STANTSIIYA SHAL. THE ONLY SIGNIFICANT FACILITY IS A DOUBLE-FENCED RADAR INSTALLATION (ALSO REPORTED UNDER THE HEADING SAROVA AND MICHURINSK).

13. STARYY OSKOL
51 18 N - 37 50 E



25X1

FULL COVERAGE OF THE CITY SHOWS RAILROAD YARDS AND SHOPS, A BRICK PLANT, A SMALL POL AREA, AND (8 MILES EAST OF THE CITY) A SMALL PROCESSING PLANT AND STRIP MINING AREA, SERVED BY RAIL, NEAR KRAMSKAYA.

14. STERLITAMAK/ISHIMBAY
53 37 N - 55 58 E -- 53 28 N - 56 02 E



25X1

AN OIL FIELD SW OF THESE TWO CITIES APPEARS ON FAR OBLIQUE PHOTOGRAPHY.

TOP SECRET CHESS